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MERCHANT & GOULD BELLSOUTH CORPORATION
P.O. BOX 2903
MINNEAPOLIS, MN 55402

EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	PAPER NUMBER
2616	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/943,956	TANG ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 4, 6, 8, 9, 11, 13 – 24, 26, 28, 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11,13-24 and 26* is/are allowed.

6)☒ Claim(s) *1-3,6,8,28 and 30* is/are rejected.

7)☒ Claim(s) *4,9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1 – 4, 6, 8, 9, 11, 13 – 24, 26, 28, 30 are pending.

2. Claims 5, 7,10, 12, 25, 27, 19, 31, 32 had been cancelled.

Specification

3. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Regarding page 2 of the specification, line 4 and line 13, it contains embedded hyperlinks. Applicant is required to delete the embedded hyperlinks.

Claim Objections

4. Claims 1, 6, 11, 20, 28 are objected to because of the following informalities:

The acronyms "ADSL" and "DSLAM" should be spelled out in full text at least once.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 28, 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "control algorithm" is in reality seeking patent protection of the computer program in the abstract as evidence Fig. 2 and page 8 of the specification. Regarding claim 28, according to page 53 of Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility "A computer readable medium storing thereon a computer executable instruction", the claim 28 is non-statutory subject matter because the claim 28 doe not have "the claimed computer-readable medium encoded with a computer program (or computer executable instruction(s)).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 6, 2, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gudmundsson et al. (US 6870901 B1) in view of Swartz et al. (US 20030074463 A1).

Regarding claims 1, Gudmundsson et al. disclose the limitation of a system for an ADSL access network for providing ADSL provision flow control at a DSLAM switch ("DSL system" correlates to a system for an ADSL access network, Fig. 12, column 5,

27 – 31), comprising: a network management system (recited "element 1210 Network Management System' correlates to a network management system; column 5, lines 33 – 42,) in communication with an element management system (recited "element 1220 Element Management System" correlates to an element management system; column 5, lines 33 – 42) that is in communication with the DSLAM switch (recited "distributing control information from NMS to the DSLAMs" correlates to in communication with the DSLAM switch; column 5, lines 33 – 42), the network management system including a control algorithm (recited "supervisory programs" correlates to control algorithm; column 8, lines 37 – 45, column 16, lines 63 – 67,) for controlling ADSL provision flow on a DSLAM switch by introducing a two level semaphore including a first semaphore (recited "the first (highest) computational level" correlates to a first semaphore; column 16, line 63,) and a second semaphore (recited "the next computational level" correlates to a second semaphore column 16, line 67); wherein the first controls a first provision request flow at the element management system level (recited "these supervisory programs interacting with DSLAM" correlates to the first controls a first provision request flow at the element management system level; column 16, lines 63 – 67) and the second controls a second provision request flow at the DSLAM switch level (recited "DSLAM managing one or more line cards (next highest computation level) correlates to second controls a second provision request flow at the DSLAM switch level column 17, lines 1 – 7).

Gudmundsson et al. do not disclose an object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch.

Swartz et al. disclose the limitation of an object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch (recited "provisioning a new access line might require provisioning activity by both LSP1 and LSP2 (LSP2 programs the switch, LSP1 provides loop connectivity" correlates to an object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch; page 16, paragraph [0191] " submit the service request" correlates to representing that a batch process; page 16, paragraph [0191]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gudmundsson et al. to include an object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch as taught by Swartz et al. in order to provide a management interface between a core telecommunication system and a local service provider, and more particularly describes a highly flexible and expandable system to accommodate new products and services (as suggested by Swartz et al., see page 1, paragraph [0007]).

Regarding claim 2, Gudmundsson et al. disclose the limitation of the system according to claimed further comprising the element management system in communication with the DSLAM switch (recited "element 1220 Element Management

System" correlates to the element management system, column 5, lines 33 – 42; recited "distributing control information from NMS to the DSLAMs" correlates to in communication with the DSLAM switch, column 5, lines 33 – 42).

Regarding claim 6, Gudmundsson et al. disclose the limitation of a system for an ADSL access network for providing ADSL provision flow control at a DSLAM switch (recited "DSL system" correlates to a system for an ADSL access network, Fig. 12, column 5, 27 – 31), means for managing an ADSL access network element (recited "element 1220 Element Management System" correlates to means for managing an ADSL access network element; column 5, lines 33 – 42,) in communication with means for multiplexing an ADSL subscribers line (recited "DSLAMs" correlates to means for multiplexing and ADSL subscriber line; column 5, lines 33 – 42) and in communication with means for managing the ADSL access network (recited "element 1210 Network Management System" correlates to means for managing an ADSL access network element; column 5, lines 33 – 42); and at least one of the following: the means for multiplexing the ADSL subscriber line (recited "DSLAMs" correlates to means for multiplexing and ADSL subscriber line; column 5, lines 33 – 42); the means for managing the ADSL access network (recited "element 1210 Network Management System" correlates to means for managing an ADSL access network element; column 5, lines 33 – 42); and means for tracking a semaphore in communication with the control algorithm; wherein the means for managing the ADSL access network (recited "element 1210 Network Management System" correlates to means for managing an

ADSL access network element; column 5, lines 33 – 42) includes means for controlling ADSL provision flow on a DSLAM switch by introducing a two level semaphore including a first semaphore and a second semaphore (column 16, line 63, recited "the first (highest) computational level" correlates to a first semaphore, and column 17, lines 1 – 7, recited "DSLAM managing one or more line cards (next highest computation level) correlates to second semaphore controls a second provision request flow at the DSLAM switch level) ; and wherein the first semaphore controls a first provision request flow at the means for managing the ADSL network element level (column 16, line 63, recited "the first (highest) computational level" correlates to a first semaphore, "these supervisory programs interact with a DSLAM" as controls a first provision request flow) and the second semaphore controls a second provision request flow at the means for multiplexing level (column 17, lines 1 – 7, recited "DSLAM managing one or more line cards (next highest computation level) correlates to second semaphore controls a second provision request flow at the means for multiplexing level); and

Gudmundsson et al. do not disclose wherein the system includes the means for managing the ADSL access network further comprising an object whose attribute is defined by the means for managing the ADSL access network for representing that a batch process is requesting activity on the means for multiplexing the ADSL subscriber line.

Swartz et al. disclose the limitation of wherein the system includes the means for managing the ADSL access network further comprising an object whose attribute is defined by the means for managing the ADSL access network for representing that a

batch process is requesting activity on the means for multiplexing the ADSL subscriber line (recited "provisioning a new access line might require provisioning activity by both LSP1 and LSP2 (LSP2 programs the switch, LSP1 provides loop connectivity" correlates to an object whose attribute is defined by the means for managing the ADSL access network for representing that a batch process is requesting activity on the means for multiplexing the ADSL subscriber line; page 16, paragraph [0191] " submit the service request" correlates to representing that a batch process; page 16, paragraph [0191]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gudmundsson et al. to include wherein the system includes the means for managing the ADSL access network further comprising a second object whose attribute is defined by the means for managing the ADSL access network for representing that a batch process is requesting activity on the means for multiplexing the ADSL subscriber line as taught by Swartz et al. in order to provide a management interface between a core telecommunication system and a local service provider, and more particularly describes a highly flexible and expandable system to accommodate new products and services (as suggested by Swartz et al., see page 1, paragraph [0007]).

Regarding claim 8, Gudmundsson et al. disclose the limitation of the system according to claimed further comprising a plurality of means for multiplexing an ADSL subscriber line (recited " DSLAMs, element 1233, 1234" correlates to a plurality of

means for multiplexing an ADSL subscriber line, Fig. 12) in communication with the means for managing an ADSL access network element (recited "EMS, element 1220" correlates to ADSL access network element, Fig. 12, element 1250 CPE, as ADSL subscriber line, column 5, lines 45 – 12).

8. Claim 3, is rejected under 35 U.S.C. 103(a) as being unpatentable over Gudmundsson et al. (US 6870901 B1) and Swartz et al. (US 6597689 B1) in further view of the Article "Efficient Implementation of Semaphores in Controller Area Networks" by Cena et al., Industrial Electronics, IEEE Transactions on, Volume 46, Issue 2, April 1999, PP417-428.

Regarding claim 3, Gudmundsson et al. disclose the limitation of the system according to claimed further comprising at least one of the following: a plurality of DSLAM switches in communication with the element management system (Fig.12, recited "DSL system" as a system for an ADSL access network, see column 5, 27 – 31, column 5, lines 33 – 42, recited element 1210 Network Management System). Gudmundsson et al. and Swartz et al. do not disclose explicitly a semaphore count register in communication with the control algorithm. The Article by Cena et al. discloses the limitation of a semaphore count register in communication with the control algorithm (page 420, third paragraph, lines 18 – 22; page 421 – 422, Fig. 3, third paragraph, lines 19 – 29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gudmundsson et al. and Swartz et al. to include a

semaphore count register in communication with the control algorithm such as that taught by the Article (by Cena et al.) in order to provide the application designer with a powerful support with which to synchronize the concurrent activities and offers a high degree of reliability and efficiency at the same time.

Allowable Subject Matter

9. Claims 11, 20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, in single or in combination, does not disclose explicitly the limitation of "wherein the GUI order bypass the batch order and is processed with priority" as disclosed in claim 11; "wherein the provision request issued by the GUI operator bypasses the batch provision request and is processed with priority" as disclosed in claim 20.

10. Additionally, all of the further limitations in claims 13, 14 – 19, 21 – 24, 26 are allowable since the claims are dependent upon the independent claims.

11. Claims 4, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed on 8/14/2006 with respect to claims 1, 2, 3, 4, 6, 8, 9, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 28, 30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ditmer et al. (US 6490620 B1) disclose a Web/Internet-based performance reporting and trouble shooting tool that enables customers to understand the performance of their broadband telecommunications data networks via a graphical user interface. The tool is an object-oriented client server application that provides customers Web/Internet access to real-time SNMP alarms, real-time events, and near real-time performance statistics and configuration reports pertaining to their virtual transport networks including ATM, Frame-Relay and other broadband networks.
- Bates (US 6658650 B1) discloses an apparatus, program product and method utilize a service entry point to trigger under a predetermined set of conditions to facilitate gaining control of a created job in a multi-job environment, namely when the job within which the service entry point was hit is not currently under debug, the job has an attribute that is common to

another job that established the service entry point, and there is another job waiting to begin servicing a job having the same attribute.

- Horvitz et al. (US 20040039786 A1) disclose a system and method to facilitate efficient and automated processing of messages. A bulk filter is provided to categorize one or more received messages according to a range of classification, the range spanning from at least a bulk classification of values to at least a non-bulk classification of values.
- Zigmond (US 20060010471 A1) discloses combining real-time and batch mode logical address links.
- Keyes et al. (US 20030041135 A1) disclose a data processing system and method for use with a process control system enables a plurality of process plants associated with different business entities to share a remotely situated data processing facility.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C. Lee/::<5/08/2007>

WING CHAN
SUPERVISORY PATENT EXAMINER